ABSTRACT:

        A method of processing images in images comprising curvilinear structures
comprises, in parallel, a step of filtering said images and a decision step intended to select the
pixels of the images pertaining to a curvilinear structure, the method comprising, in parallel,
a sub-step of estimating the direction of each image pixel, as well as a sub-step of analyzing
5   the connectivity of neighboring pixels based on their directions at the end of the sub-step of
estimating the direction of each image pixel, and a sub-step of selecting groups of pixels as a
function of the result of the sub-step of analyzing the connectivity of neighboring pixels
based on their directions, at the end of the step of filtering. Such a method allows selection of
curvilinear structures which are fine structures such as a catheter in a medical image, or
10   thicker structures such as a tree-like structure of blood vessels. This method may be used, for
example, in medical scanning apparatus for detecting artery anomalies such as stenosis or a
diffuse coronary disease.

Fig. 1